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Seven Giralda Farms
Madison, NJ 07940
Tel: 973-410-8593
Fax: 973-410-8583



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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

September 12, 2001

BY HAND

Magalie Roman Salas, Secretary
Federal Communications Commission
445 Twelfth Street, S.W. - Suite TW-A325
Washington, D.C. 20554

Re: IB Docket No. 00-106 /
Written Ex Parte Presentation
Review of Commission Consideration of Applications under
the Cable Landing License Act

Dear Ms. Salas:

Attached please find an article concerning submarine cables that appeared in the August 1, 2001 issue of Lightwave magazine, entitled "Is survival the industry's new mantra?" The article makes two points that are particularly noteworthy. First, the article describes the general economic fragility of the private subsea cable operators and the expected decline in spending on subsea construction. Second, the article posits a growing trend towards "co-opetition" whereby private cable operators are electing to form mini-consortia with other private cable operators rather than operate a cable alone.

These two points are important for the Commission's consideration of streamlining submarine cable applications. As Global Crossing has previously stated, the submarine cable market is in an unprecedented state of flux and uncertainty, and it is therefore critical that the Commission proceed with caution in this rulemaking. Contrary to the statements of AT&T, the subsea cable business is not fully competitive, and, consequently, wholesale deregulation would almost certainly lead to substantial anticompetitive behavior, and would greatly increase the risk that competition would not take hold for subsea cables.

In fact, recent Commission actions concerning submarine cable landing applications demonstrate the continuing need for case-by-case review of such applications. In three separate orders – the *Japan-U.S Order*, the *Telefonica SAM Order*, and the

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applications. In three separate orders – the *Japan-U.S Order*, the *Telefonica SAM Order*, and the *Australia-Japan Cable Order* – the Commission elected to impose distinct conditions for approval of each of the applications rather than impose a blanket set of conditions for all.¹ The conditions imposed on these consortia varied and were not uniform because the circumstances differed in each one. The common aspect to the conditions was that the Commission believed they were necessary to redress concerns regarding the behavior of the dominant foreign carrier. It is precisely for this reason that the Commission should continue to review cable landing applications involving dominant foreign carriers on a case-by-case basis.

Many cable landing applications, however, do not involve dominant foreign carriers. Global Crossing supports WorldCom's proposal that the Commission establish a category of applications for cables for which the cable stations and backhaul at the foreign end are controlled by carriers without market power, and streamline review of applications in this category.² Specifically, this safe harbor would include applications for cables for which neither the cable landing station(s) nor the backhaul on the foreign end of the cable is 50% or more controlled by a carrier with market power in the relevant foreign market. Applications for cables that do involve dominant foreign carrier control of landing stations or backhaul would continue to be reviewed on a case-by-case basis so as to provide the Commission with the opportunity to address unique issues associated with the dominant foreign carriers.

Alternatively, should the Commission find sufficient evidence that a single set of conditions would address the risks of anticompetitive behavior with respect to cables involving dominant foreign carriers, the Commission could establish a second category of applications eligible for streamlined review. As described in the Commission's Notice of Proposed Rulemaking on subsea cables (the "*Notice*"), applicants could demonstrate that they fall within this safe harbor by supplying documents – such as a construction and maintenance agreement ("C&MA") – demonstrating that they are contractually required to comply with certain conditions.³

¹ See *AT&T Corp. et al., Joint Application for a License to Land and Operate a Submarine Cable Network Between the United States and Japan*, Cable Landing License, 14 FCC Rcd 13066 (1999) ("*Japan-U.S Order*"); *Telefonica SAM USA, Inc. and Telefonica SAM de Puerto Rico, Inc., Application for a License to Land and Operate in the United States a Private Submarine Fiber Optic Cable Network Extending Between Florida, Puerto Rico, Brazil, Argentina, Chile, Peru, and Guatemala*, Cable Landing License, 15 FCC Rcd 14915 (2000) ("*Telefonica SAM Order*"); *Australia-Japan Cable (Guam) Limited, Application for License to Land and Operate in the United States a Private Submarine Fiber Optic Cable Extending Between Australia, Guam, and Japan*, Cable Landing License, 15 FCC Rcd 24057 (2000) ("*Australia-Japan Cable Order*").

² See WorldCom Comments, filed August 21, 2000, in the above-captioned proceeding.

³ See generally *Review of Commission Consideration of Applications under the Cable Landing License Act*, Notice of Proposed Rulemaking, IB Docket No. 00-106, 15 FCC Rcd 20789, ¶¶ 40-50 (2000) ("*Notice*") (seeking comment on "Pro-Competitive Arrangements" streamlining option). Several parties submitted comments to the *Notice* expressing support for the Pro-Competitive Arrangements option. See WorldCom Comments at 12-13; Viatel Comments at 10-11; Flag Telecom Comments at 10, n. 18 (filed

Specifically, in order to qualify for streamlining, applicants might include in the C&MA or other documents “provisions allowing for sufficient collocation at a landing station by other owners or their designees and stating that there will be no restrictions on who can provide backhaul.”⁴ To provide more specificity to the meaning of the phrase “sufficient collocation,” the Commission could also state that the documents should include the following provisions: (i) if insufficient space exists at a landing station, the landing party may provide such space in a separate building adjacent to the landing station;⁵ (ii) space, connection facilities, and necessary service must be provided promptly and without discrimination;⁶ and (iii) collocation and backhaul rights apply to holders of an indefeasible right of use (“IRU”) as well as owners of equity.⁷

The C&MA or other relevant documents should also include certain provisions regarding capacity upgrades and use of capacity. First, a provision should be included that would “allow the capacity of a cable to be upgraded either by a 51 percent vote of the owners or by any group of owners voting to fully fund the cost of the upgrade.”⁸ In addition, the documents should establish that, after the initial capacity has been funded, there will be no restrictions on resale or transfer of capacity and no restrictions on parties reselling their ownership shares and/or reselling or leasing their rights on the cable.⁹ There should likewise be no restrictions on the use of wholly-owned circuits by owners or third parties.¹⁰ Finally, documents should establish that smaller firms may combine their capacity requirements for the purpose of obtaining volume discounts.¹¹

In determining the nature and timing of further action in the above-captioned proceeding, the Commission should take into account the substantial uncertainty surrounding the subsea cable business today, and should proceed with extreme caution. The creation of safe harbors described above may, however, allow significant streamlining without undue risk of reversing the progress toward competition that has been made thus far.

August 21, 2000); *see also* Level 3 Reply Comments at 7 (filed September 20, 2000) (proposing that an application should qualify for streamlining if the applicant certifies compliance with certain pro-competitive conditions).

⁴ Notice ¶ 41. *See* WorldCom Comments at 12; Viatel Comments at 10. *See also* Level 3 Reply Comments at 7.

⁵ *See* Viatel Comments at 10.

⁶ *See id.* at 11.

⁷ *See* Notice ¶ 44.

⁸ Notice ¶ 47. *See* WorldCom Comments at 13; Viatel Comments at 11.

⁹ Notice ¶ 48. *See* WorldCom Comments at 13; Viatel Comments at 11. *See also* Level 3 Reply Comments at 7.

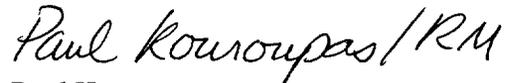
¹⁰ WorldCom Comments at 13.

¹¹ Notice ¶ 49. *See* Viatel Comments at 11. *See also* Level 3 Reply Comments at 7.

Ms. Salas
September 12, 2001
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Pursuant to section 1.1206(b)(1) of the Commission's rules, 47 C.F.R. § 1.1206(b)(1), an original and one copy of this letter and enclosure are being provided to you for inclusion in the public record of the above-referenced proceeding.

Sincerely,

A handwritten signature in cursive script that reads "Paul Kouroupas/RM".

Paul Kouroupas
Senior Counsel, Worldwide Regulatory and
Industry Affairs
Global Crossing Ltd.

cc: Jackie Ruff
George Li
Claudia Fox
Kate Collins

Enclosure

Is survival the industry's new mantra?

Competition in submarine networks

The dynamics between the submarine carriers that own today's high-risk, underutilized transoceanic systems can best be described as "co-opetition."

JULIAN RAWLE, Pioneer Consulting

Cable operator 360networks' recent announcement of the cancellation of its planned transpacific and pan-Asian cables, followed by a default on its bond interest payments, is the first clearly visible sign that the submarine telecommunications cable industry is entering a new and more difficult phase of development. How are the cable owners going to adjust to the new economic realities? And what effect will changes in their strategic direction have on their suppliers?

Recession looming?

In the two-year period leading up to the end of 2002, a staggering \$28 billion will have been invested in submarine cable systems around the world. This amount compares with an average of \$9.2 billion per year from 1988 to 2000, which is in itself a huge sum.



The finance markets today look at the telecommunications sector and see inflated prices paid for 3G mobile licenses, delays in delivering broadband-enabling DSL technology to the local loop, and companies failing to make their forecast revenue figures. It is no wonder that enthusiasm for investing in submarine cables has also waned.

Add to this the fact that by the end of 2003, only 14% of the total submarine capacity in the water will actually be lit and generating a revenue stream, and you have all the ingredients for an industry recession, cash flow crises, company restructuring, and even failure.

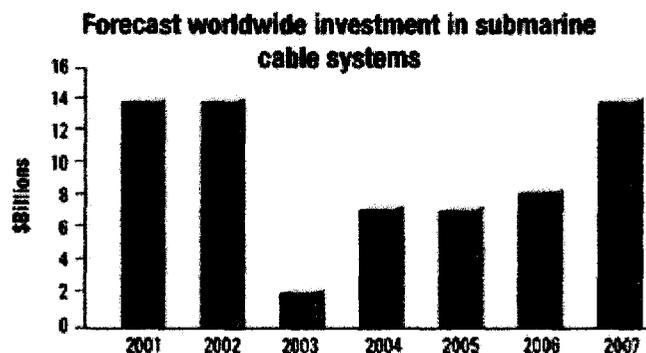
Figure 1 shows Pioneer Consulting's forecast of investment in submarine cable systems until 2007. As Figure 1 indicates, 2003 will be an exceptionally difficult year for any company that derives its revenue from the submarine cable industry.

Subsequently, investment levels will recover up to around the annual average, as growth in Internet demand requires capacity upgrades to existing cables. Since terminal station equipment (especially DWDM) now constitutes about 50% of the total value of a long-haul cable system, it will provide a welcome revenue stream to the equipment vendors. The marine contractors, however, will not have this cushion to fall back on. Only in 2007 will there be a level of investment in submarine cables similar to today's.

Today's market

Figure 2 shows what the submarine cable market looks like today. The market consists of three levels: the cable owners, the system suppliers, and the marine contractors.

The cable owners initiate and obtain funding for cable projects in order to capture and transport specific streams of revenue-generating telecommunications traffic between markets. A modern transoceanic system will cost between \$1 billion to \$2 billion, so the cable owner's risk exposure is large. Cable owners are characterized according to the footprint of their network as global, transoceanic, or regional.



The system suppliers, or vendors, that supply the various equipment-fiber, cable, terminal equipment, and submarine optoelectronics-can be characterized as either turnkey or component suppliers. Some of the turnkey suppliers manufacture cable, while others do not. As overall project managers, the turnkey suppliers' risk is also considerable. Their contract with the cable owner generally contains a liquidated damages clause, which puts up to 10% of the contract value at risk for failure to deliver on time and requires the supplier to provide a two-year warranty on the components and the installation work.

shore station or worse, to the beach manhole, and leave the customer to arrange the back-haul. The private cables can also provide dark or dim fiber, which allows the customer varying levels of management control over the circuits. That would be unthinkable in the consortium model.

The real difficulty for private cables is in competing with other private cables on the same route. Here, the ability to differentiate one's product is limited-how much better is one gigabit versus another gigabit?

The co-opetition concept

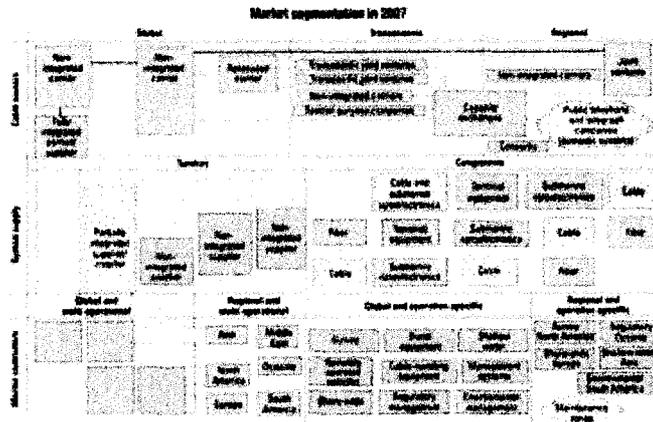
The realization of this fact has led to two developments. First, private cable owners recognized that they could not compete at the physical submarine cable layer and so focused on providing differentiated services in the metro space at the ends of the cable.

Second, wherever possible, private cable owners have sought to strike deals with each other to share the risks in their long-haul submarine cables. Level 3's planned transatlantic Yellow submarine cable became two dark fiber pairs on Global Crossing's Atlantic Crossing-2 cable. TyCom's planned transpacific cable has become four dark fiber pairs on FLAG Telecom's FLAG Pacific-1 cable.

FLAG Telecom has also combined its planned pan-Asian system with Level 3's plans for the same. In this case, the two carriers each own three fiber pairs, but the system is managed and operated by FLAG Telecom. 360networks had combined its plans for a pan-Asian network and a transpacific cable with C2C (SingTel) until the former's funding ran out.

So the balance has swung back from unilateral submarine cable development toward mini-consortia, and the window of opportunity for easy funding has closed. Furthermore, the dynamics at the submarine level between the carriers that own these huge risk-laden and underutilized transoceanic systems can best be described as co-opetition.

For the period 1999-2003, Alcatel Submarine Networks' (ASN) market share of awarded worldwide submarine cable installations and upgrades is 34%. In the same period, Tyco Submarine Systems Ltd. (TSSL) has won 29% of the available business (excluding TyCom contracts). The nearest challenger to this near duopoly is Kokusai Denshin Denwa-Submarine Cable Systems (KDD-SCS) with 16%.



Other major players in the systems supply market are NEC (8%) and Fujitsu (7%). Piirelli is a significant supplier of cable but is not generally the main contractor for major systems. Siemens, Ericsson, and Corning/Nord deutsche Seekabelwerke (NSW) focus on smaller regional systems.

The value of supply contracts for planned submarine cable systems that have yet to be awarded is in the region of \$5 billion.

It does not take a regulator's eye to see that there is a relatively low level of competition in this market. To make matters worse, TyCom has decided to use 50% of subsidiary TSSL's cable and repeater manufacturing capacity to build its own global network between now and 2010.

TyCom's move into the carrier market also raises conflict of interest issues. Currently, the company is sitting on the fence and its customers, the carriers, are watching warily. At some point, TyCom will have to decide which market it really wants to be in.

Other than ASN, potential claimants to TSSL's relinquished market share lack the experience and credibility to be entrusted with the management of multibillion-dollar projects.

NEC caused a stir in 2000 by bidding well below market levels to win the lead contracts for APCN-2 (pan-Asian consortium cable) and for AJC (Australia-Japan mini-consortium).

Having won phase 1 of Global Crossing's East Asia Crossing, KDD-SCS lost out to NEC on phase 2. Although the cable is operational, KDD-SCS still has to complete the final sections of TAT-14 (transatlantic consortium cable) and is also distracted by questions over its business fit with its Japanese carrier parent, KDD.

Pouring oil on troubled waters, NEC announced in early 2001 a non-exclusive alliance with Japanese cable manufacturer, Ocean Cable and Communications Corp. (OCC). This deal effectively gives NEC first refusal on all of OCC's cable production. OCC had traditionally been the prime cable supplier to KDD-SCS.

This move was in response to the shortage of cable manufacturing capacity to meet the heightened demand in 2001 and 2002. However, forecasts indicate that, based on today's worldwide cable manufacturing capacity of about 200,000 km per year, this kind of shortage will not occur again before 2007. Until that time, Pirelli, Ericsson, and Corning/NSW, as suppliers of cable, appear vulnerable.

ASN has been hurt recently, not by competition, but by the downturn in the market, which has seen at least \$3.4 billion wiped off its order books for 2002 through project cancellations and amalgamations. Fujitsu has had a long association with ASN, supplying components, but has recently won in its own right the contract for Nava-1 (Australia-Jakarta-Singapore private cable). Alcatel continues to forge new strategic alliances such as the recently announced cross-licensing agreements with Corning and Sumitomo and a supply contract for laser chips and pump stabilizers with JDS Uniphase. However, Alcatel's attempt to acquire Lucent Technologies appears to have failed for the moment.

The downturn in installation activity forecast by Pioneer for 2003 will hit all of the system suppliers hard. Nevertheless, when the capacity upgrade activity begins in 2004, TyCom's focus on its own network-build will leave ASN/Fujitsu in a good position. NEC's 2001 and 2002 order book gives the company a good chance of riding the storm. KDD-SCS appears to be in the weakest position, with few orders and a lack of strategic direction.

Marine contractor segment

The fundamental problem with the marine telecommunications cable installation market is that it is prone to peaks and troughs, while a marine installer's main revenue-generating assets, the ships, are depreciated over 25 years and produce a relatively low return on capital investment of about 10%.

For this reason, as deregulation takes hold in the worldwide telecommunications market and competition increases, telecommunications companies find that they can no longer support this line of business. Cable & Wireless divested its market-leading marine business to Global Crossing, which needed a fleet of ships to build and maintain their new network. The company is now known as Global Marine Systems Ltd. (GMSL) and has 24 vessels.

Telefónica sold Temasa to TyCom for the same reason and ASN has acquired Telecom Danmark's fleet, as well as British firm CTC Marine Projects. Including new builds, TyCom now has 17 ships and ASN has 14 at its disposal.

There remain a number of smaller marine contractors. France Cables et Radio (FCR) is still a subsidiary of France Telecom. Its four ships participate in major projects such as TAT-14 and Southern Cross (North America-Australia mini-consortium cable).

Elettra is a subsidiary of Telecom Italia and operates its three ships exclusively in the Mediterranean. KDD-KCS is owned by KDD. Its two ships operate mainly around Japan. KST belongs to Korea Telecom and covers the Asia-Pacific region with one ship. SBSS, with two vessels, is a Chinese joint venture managed by GMSL. Nippon Telephone and Telegraph World Engineering Marine Corp. is a joint venture between GMSL and NTT Communications and operates two vessels mainly around Japan.

Despite this plethora of small, regionally based marine contractors, marine installation contracts for major systems usually require multivessel solutions and considerable project management experience. Consequently, these smaller operators tend to be subcontracted on an as-needed basis by the big three: GMSL, TyCom, and ASN. However, the tendency for telecommunications companies to divest such assets is so strong that it can only be a matter of time before the likes of FCR, Elettra, and maybe KDD-KCS are put up for sale.

Unfortunately, this is not a good time to be selling tonnage. With the end of the peak of cable installation activity in sight for the next few years, there is a large surplus of vessels, which are going to be competing for meager pickings. With their economies of scale and long-term maintenance contracts, GMSL, TyCom, and ASN should be able to survive. Maintenance contracts, mainly from their parent companies for domestic submarine cables, will likely be the sole source of revenue for the smaller players.

Of the big three, GMSL appears the most vulnerable. Global Crossing's network build is almost complete. GMSL has a long-term contract to maintain this network but, like Cable & Wireless, Global Crossing may find its shareholders asking difficult questions about keeping an asset with such a low return on investment. Furthermore, both TyCom and ASN have begun to offer "cradle-to-grave" solutions to cable owners, taking responsibility for installing, maintaining, and ultimately decommissioning the cable. Despite an alliance with NEC and OCC, GMSL's lack of turnkey system supply capability makes it difficult to compete with such an offering.

Brave new market

So how will competition in the different levels of the submarine telecommunications cable market affect the market's composition? Figure 3 shows Pioneer's view of what the market may look like in 2007.

Within the cable owner segment, Pioneer forecasts that capacity exchanges will come to play a pivotal role in the market. Today, these exchanges are nascent at best. Their development is being hampered by difficulties in producing standardized contracts that can guarantee a certain level of service and delivery. However, Pioneer believes that the continued collapse in bandwidth prices, driven by competition and new technology, combined with a potentially

massive oversupply of capacity, will make capacity exchanges a necessary tool in the future for optimizing a carrier's network.

Pioneer also forecasts a continuation of the co-opetition, which is currently characterizing the long-haul carrier market. Some carriers with global network aspirations will be forced to refocus. These providers will either adopt a strategic mix of build and buy, or limit their geographical coverage. New global networks will not emerge in the foreseeable future.

As for the system supplier market, Pioneer does not foresee any serious challenge to the virtual duopoly of ASN and TyCom. If anything, depending on how quickly TyCom chooses to build out its own network, ASN's market share may grow.

There has been much speculation about if and when ASN will follow TyCom's lead into the carrier market. In addition to building its own network, TyCom has taken equity stakes in a number of cable systems in order to win the construction contract. ASN has tried to avoid, wherever possible, the need for supplier finance of any kind, although the company recently provided financing for Cable & Wireless' transatlantic Apollo project. It also remains to be seen how ASN will deal with the convertible bond purchased as part of a strategic alliance with 360networks, now that their partner has cancelled all further network construction.

ASN's cradle-to-grave approach has the company striking deals with carriers to provide maintenance not only of the cables, but also the terminal stations. Furthermore, ASN is trying to grow its facilities management outsourcing business, servicing the needs of new carriers that do not wish to invest in network-management resources and of incumbents that find it cost-effective to outsource management of their legacy networks. Pioneer believes that trying to copy TyCom with another global network offers no advantage to Alcatel. However, the development of an outsourced facilities management service may serve as a non-threatening back-door entry to the carrier market by Alcatel.

Only a united Japan Inc. approach from NEC, Fujitsu, and KDD-SCS could challenge ASN and TyCom. The present state of the Japanese economy could act as a stimulus for such a consolidation, but the cultures of these three organizations are so different that a merger would be fraught with difficulty.

On the other hand, Pioneer forecasts that the component supply sector will see a rash of mergers and acquisitions, driven by the need to reduce costs, achieve economies of scale, and maintain revenue flows. Lucent Technologies' recent debt-servicing difficulties are not an isolated case. A natural consequence of that will be to put the brakes on research and development of broadband technologies at a time when the market is having trouble digesting the available capacity of transoceanic cables.

Consolidation in this sector, however, will not produce a serious challenger to ASN and TyCom in the submarine cable market, because their depth of knowledge and project management experience presents a considerable barrier to entry.

Batten down hatches

While capacity upgrades will help the system suppliers survive the coming lean period, that will not provide succor for the marine sector. Pioneer forecasts that the days of the global independent marine contractor are numbered. If the system suppliers continue their strategy of vertical integration into this segment, their competitive advantage will be irresistible.

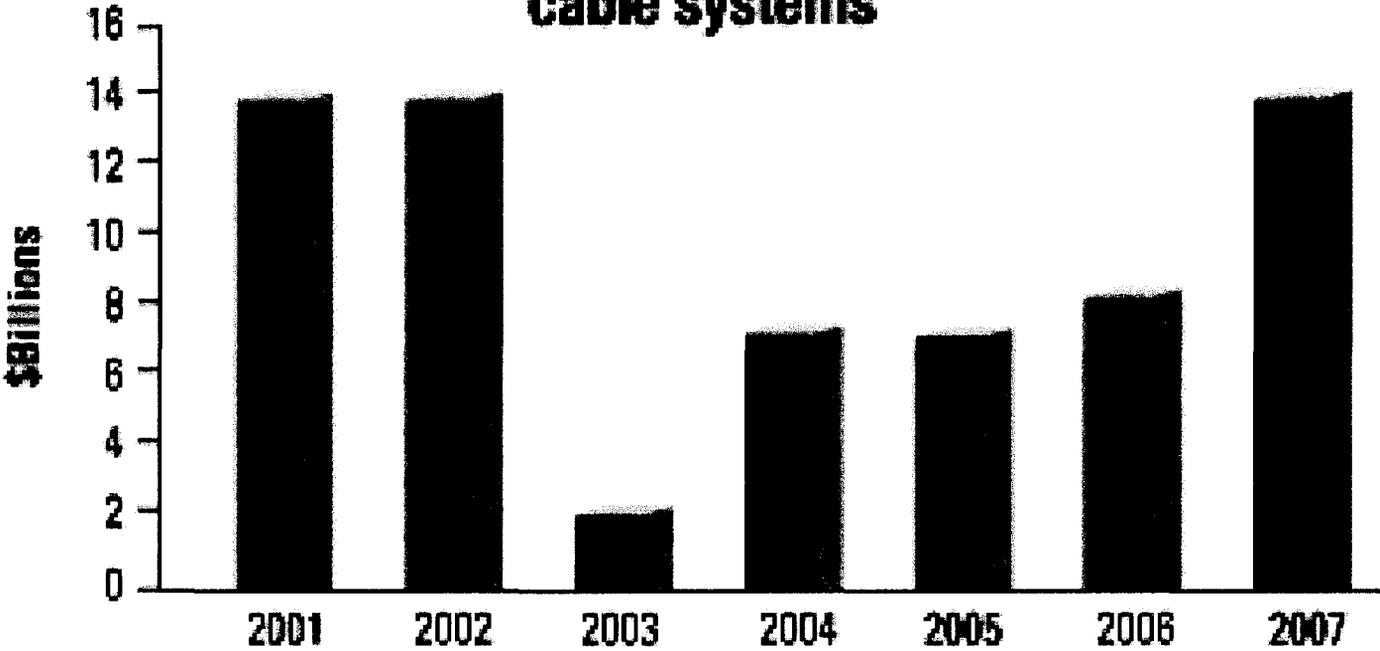
Equally, the regional marine contractors, particularly in Asia, North America, and Europe will find it difficult to obtain the necessary capital investment from their parent companies to renew their assets. Consequently, these companies will be forced to consolidate or be liquidated. Going it alone will not be an option.

"Competition" is the watchword of all free marketers. It has brought great benefits to the telecommunications user and engendered a boom in the industry. However, in the long-haul submarine cable-owning sector, it is mixed with a heavy dose of cooperation. In the systems supply and marine contractor sectors, it is subservient to the monoliths of ASN and TyCom. If Pioneer's forecasts for the industry prove to be anywhere near correct, then the watchword should be "survival."

Julian Rawle is senior market analyst at Pioneer Consulting (Boston).

Lightwave August, 2001

Forecast worldwide investment in submarine cable systems



Traditional market segmentation

